

WHAT IS CLAIMED IS:

1. A microstructured component having a layered construction, comprising:
  - a carrier including at least one glass layer;
  - a component structure including a first silicon layer bonded to the glass layer; and
  - a cap arranged over the component structure and bonded to the glass layer.
2. The microstructured component of claim 1, wherein the glass layer includes a Pyrex layer.
3. The microstructured component of claim 1, wherein the component structure includes a first silicon wafer and is bonded to the glass layer by anodic bonding.
4. The microstructured component of claim 3, wherein the first silicon wafer includes a (111)-silicon wafer.
5. The microstructured component of claim 1, wherein the cap includes a second silicon wafer and is bonded to the glass layer by anodic bonding.
6. The microstructured component of claim 1, further comprising conductor paths arranged to contact the component structure arranged between the glass layer and the component structure.
7. The microstructured component of claim 1, further comprising at least one electrically conductive shield arranged on the glass layer, at least part of the component structure electrically connected to the shield.
8. The microstructured component of claim 7, wherein the glass layer includes a structured metallization in which conductor paths and shields are arranged.

9. The microstructured component of claim 1, wherein the component structure is enclosed in a vacuum between the glass layer and the cap.

10. A micromechanical sensor element including a layered construction, comprising:

a carrier including at least one glass layer;

a component structure including at least one deflectable element and a first silicon layer bonded to the glass layer; and

a cap arranged over the component structure, the cap bonded to the glass layer and configured to provide an overload protector for the deflectable element.

11. The micromechanical sensor element of claim 10, wherein the micromechanical sensor element is configured to detect accelerations and angular rates.

12. A method of manufacturing a microstructured component having a layered construction, the microstructured component including a carrier including at least one glass layer and a component structure arranged in a silicon layer, comprising the steps of:

bonding a first silicon wafer to the glass layer;

producing the component structure in the first silicon wafer;

positioning a cap over the component structure; and

bonding the cap to the glass layer.

13. The method of claim 12, wherein the glass layer includes a Pyrex layer.

14. The method of claim 12, wherein the first silicon wafer includes a (111)-silicon wafer and is bonded in the first silicon wafer bonding step to the glass layer by anodic bonding.

15. The method of claim 12, wherein the cap includes a second silicon wafer and is bonded in the cap bonding step to the glass layer by anodic bonding.

16. The method of claim 12, wherein at least one of a surface of the first silicon wafer to be bonded to the glass layer and the glass layer is pre-structured, at least one bonding area formed to project out of the surface of the glass layer.

17. The method of claim 12, wherein the glass layer includes a structured metallization, the method further comprising producing conductor paths configured to contact the component structure and shields configured to prevent electrostatic adhesion of the component structure during anodic bonding.

18. The method of claim 12, further comprising thinning the first silicon wafer to a preset thickness.

19. The method of claim 12, further comprising producing at least one opening in the cap and sealing the opening only under defined pressure conditions after the cap is bonded to the glass layer in the cap bonding step.

20. The method of claim 17, wherein the cap is bonded to the glass layer in the cap bonding step to contact both the conductor paths and the shields, the method further comprising providing contact pads in the cap by electrically insulating appropriate regions of the cap through peripheral trenches.

21. The method of claim 20, further comprising providing isolation trenches during the contact pad providing step and sealing the isolation trenches with an electrically insulating material in a chemical vapor deposition method, a vacuum being enclosed under the cap.